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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,991	11/18/2003	Charles R. Hellicr	P9538	4883
32658 7590 01/26/2007 HOGAN & HARTSON LLP ONE TABOR CENTER, SUITE 1500 1200 SEVENTEEN ST. DENVER, CO 80202			EXAMINER NGUYEN, PHILLIP H	
			ART UNIT 2191	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/26/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/715,991

Applicant(s)

HELLIER, CHARLES R.

Examiner

Phillip H. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This action is in response to amendment filed on 11/06/2006. Claims 1-20 remain pending.

#### ***Oath/Declaration***

2. The amendment filed on 11/06/2006 overcomes the defective of Oath/Declaration of the previous action.

#### ***Specification***

3. The amendment filed on 11/06/2006 overcomes the objection to the abstract of the previous action. Therefore, the objection is withdrawn.

#### ***Claim Rejections - 35 USC § 112***

4. The amendment filed on 11/06/2006 overcomes the rejection to claim 1 that recites "...automatically..." of the previous action. Therefore, the rejection under 35 USC § 112 is withdrawn.

#### ***Response to Amendment***

5. Per Applicant's argument regarding Becker does not disclose "wherein the target compute element is selected by comparing the at least one operating parameter with the compute element characteristics" and "a repository of compute element characteristics for each of the plurality of computer elements", the argument is moot in view of new ground of rejection.

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***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-5, 7-13, and 16-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Hellerstein et al. (United States Patent No.: US 7,013,461 B2).

As per claim 1:

Hellerstein discloses a computer network comprising:

- a plurality of compute elements (**see for example, FIG. 2, items 203 Region server and Target 202**);
- a repository comprising compute element characteristics for each of the plurality of computer elements (**see for example FIG. 2, item 204**);  
and
- Software having at least one operating parameter (**see for example, FIGS. 3-4, "S refers to a service comprising one or more software components, while C refers to a software component which constitutes a service" Col 5, line 45-47; "Component C has various categories of dependencies that include hardware (e.g., CUP,**

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**Memory, Disk), software (e.g., C4, C5) and service elements...**" Col 6, line 10-14), wherein based on control logic the software is automatically installed on a target compute element selected from the plurality of compute elements ("**a region server 203 maintains the region role repository 204 for one region, answers queries of a service distribution server 205, determines whether targets have appropriate resource, distributes software to targets and initiates their installations and post-installation steps (e.g., reboot of target) if these are not covered by a package installation routine**" Col 4, line 46-54), and wherein the target compute element is selected by comparing the at least one operating parameter with the computer element characteristics of each of the plurality of computer elements ("**determine whether targets have appropriate resources**" Col 4, line 48-50).

As per claim 2:

Hellerstein discloses the computer network as in claim 1 above; and further discloses:

- wherein the plurality of compute elements comprises servers ("**servers**" Col 2, line 52).

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As per claim 3:

Hellerstein discloses the computer network as in claim 2 above; and further discloses:

- wherein the plurality of compute elements comprises a server farm  
    **("one or more region servers" Col 2, line 52, a server farm is a group of networked servers that is housed in one location).**

As per claim 4:

Hellerstein discloses the computer network as in claim 1 above; and further discloses:

- wherein the computer element characteristics include processor characteristics, memory characteristics, storage characteristics, peripheral characteristics, networking characteristics, operating system characteristics, security characteristics or service level characteristics  
    (Col 4, line 60-65).

As per claim 5:

Hellerstein discloses the computer network as in claim 1 above; and further discloses:

- wherein the at least one operating parameter includes processor requirements, memory requirements, storage requirements, peripheral requirements, networking requirements, operating system requirements, security requirements, timing requirements, software

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availability requirements or service level requirements ("**dependencies that include hardware (CPU, Memory, Disk), software and service elements**" Col 6, line 10-15).

As per claim 7:

Hellerstein discloses the computer network as in claim 1 above; and further discloses:

- wherein control logic logic ("**Region server 203**" Col 8, line 31, **control host logic is inherent in Region sever 203 in order to perform the comparing operation**) receives the at least one operating parameter and the compute element characteristics to perform said comparing of the at least one operating parameter with the compute element characteristics ("**performs inventor scan. After receiving a package, the region server determines if each of the end point machines has an appropriate amount of resources (CPU, RAM, disk space, swap space, etc**" Col 8, line 31-35).

As per claim 8:

Hellerstein discloses the computer network as in claim 7 above; and further discloses:

- control logic identifies the target compute element to install the software ("**the RS (Region Server) performs an inventory scan to determine the environment of the machine. If the result satisfies**

**the dependency requirements of the software package, the end machine is a potential target” Col 8, line 54-57).**

As per claim 9:

Hellerstein discloses a computer network comprising:

- a plurality of host computes (**see for example, FIG. 2, items 203 Region Server and Target 202**), including a current computer subset (“**Region Server 203**”) and at least one target computer (“**Target 202**”);
- a repository comprising computer characteristic for each of the plurality of host computers (**see for example FIG. 2, item 204**); and
- software having at least one operating parameter (**see for example, FIGS. 3-4, “S refers to a service comprising one or more software components, while C refers to a software component which constitutes a service” Col 5, line 45-47; “Component C has various categories of dependencies that include hardware (e.g., CUP, Memory, Disk), software (e.g., C4, C5) and service elements...” Col 6, line 10-14**), wherein the software has been automatically reprovisioned from the current computer subset to the at least one target computer in a reprovisioning event (“**a region server 203 maintains the region role repository 204 for one region, answers queries of a service distribution server 205, determines whether targets have appropriate resource, distributes software to targets**



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**and initiates their installations and post-installation steps (e.g., reboot of target) if these are not covered by a package installation routine"** Col 4, line 46-54), wherein the reprovisioning event includes selecting the at least one target computer based on comparing the at least one operating parameter with the computer characteristics or a key performance indicator of each of the plurality of host computer (**"determine whether targets have appropriate resources"** Col 4, line 48-50).

As per claim 10:

Hellerstein discloses the computer network as in claim 9 above; and further discloses:

- wherein the plurality of host computer comprises servers ("**servers**" Col 2, line 52).

As per claim 11:

Hellerstein discloses the computer network as in claim 9 above; and further discloses:

- wherein the plurality of host computers comprises a server farm ("**one or more region servers**" Col 2, line 52, **a server farm is a group of networked servers that is housed in one location**).

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As per claim 12:

Hellerstein discloses the computer network as in claim 9 above; and further discloses:

- wherein the computer characteristics include processor characteristics, memory characteristics, storage characteristics, peripheral characteristics, networking characteristics, operating system characteristics, security characteristics or service level characteristics (Col 4, line 60-65).

As per claim 13:

Hellerstein discloses the computer network as in claim 9 above; and further discloses:

- wherein the at least one operating parameter includes processor requirements, memory requirements, storage requirements, peripheral requirements, network requirements, operating system requirements, security requirements, timing requirements, software availability requirements, or server level requirements ("**dependencies that include hardware (CPU, Memory, Disk), software and service elements**" Col 6, line 10-15).

As per claim 17:

Hellerstein discloses the computer network as in claim 9 above; and further discloses:

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- comprising control host logic ("**Region server 203**" Col 8, line 31, **control host logic is inherent in Region sever 203 in order to perform the comparing operation**) that receives the at least one operating parameter and the computer characteristics to perform said comparing of the at least operating parameter with the computer characteristics or the key performance indicator ("**performs inventor scan. After receiving a package, the region server determines if each of the end point machines has an appropriate amount of resources (CPU, RAM, disk space, swap space, etc**" Col 8, line 31-35).

As per claim 18:

Hellerstein discloses the computer network as in claim 17 above; and further discloses:

- wherein said control host logic identifies the target computer to install the software ("**the RS (Region Server) performs an inventory scan to determine the environment of the machine. If the result satisfies the dependency requirements of the software package, the end machine is a potential target**" Col 8, line 54-57).

As per claim 19:

Hellerstein discloses the computer network as in claim 9 above; and further discloses:

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- wherein said current computer subset comprises one or more of the plurality of host computers ("**see for example, FIG. 2**").

As per claim 20:

Hellerstein discloses a computer network comprising:

- a plurality of host computes (**see for example, FIG. 2, items 203 Region Server and Target 202**), including a first computer ("**Region Server 203**") and at least one target computer ("**Target 202**");
- a repository comprising computer characteristic for each of the plurality of host computers (**see for example FIG. 2, item 204**); and
- software having at least one operating parameter (**see for example, FIGS. 3-4, "S refers to a service comprising one or more software components, while C refers to a software component which constitutes a service" Col 5, line 45-47; "Component C has various categories of dependencies that include hardware (e.g., CUP, Memory, Disk), software (e.g., C4, C5) and service elements..." Col 6, line 10-14**), wherein based on control logic the software has been automatically installed on the first computer selected from the plurality of host computer ("software distribution from SDS to region server 203" Col 8, line 20-21), and wherein the first computer is selected by comparing the at least one operating parameter with the computer characteristics of each of the plurality of host computers ("**determine al**

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- the region servers 203 whose service profiles match the service that is going to be provided by the new package" Col 8, line 10-12); and
- wherein the software is automatically reprovisioned from the first computer to the at least one target computer in a reprovisioning event (**"a region server 203 maintains the region role repository 204 for one region, answers queries of a service distribution server 205, determines whether targets have appropriate resource, distributes software to targets and initiates their installations and post-installation steps (e.g., reboot of target) if these are not covered by a package installation routine"** Col 4, line 46-54), wherein the reprovisioning event includes selecting the at least one target computer based on comparing the at least one operating parameter with the computer characteristics or a key performance indicator of each of the plurality of host computer (**"determine whether targets have appropriate resources"** Col 4, line 48-50).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. Claims 6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hellerstein et al. (United States Patent No.: US 7,013,461 B2), in view of Drake et al. (United States Patent Application Publication No.: US 2003/0163807 A1).

As per claim 6

Hellerstein discloses the computer network as in claim 1 above, but does not explicitly disclose:

- wherein the comparing of the at least one operating parameter with the computer characteristics comprises ranking the host computers suitably to host the software based on a comparison of the at least one operating parameter with at least one of the computer characteristics for each of the host computers.

However, Drake discloses an analogous computer network comprises:

- wherein the comparing of the at least one operating parameter with the computer characteristics comprises ranking the host computers suitability to host the software based on a comparison of the at least one operating parameter with at least one of the computer characteristics for each of the host computers ("**ranking the potential target systems according to their suitability assessments**" Paragraph 0022).

Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to modify Hellerstein's approach to

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include ranking the target device. One having an ordinary skill in the art would have been motivated to modify because **“enabling the installation process to be simplified for software installers as well as for the software developers who must prepare their software for an efficient, trouble free installation, and define several techniques for improving installation of software packages”** Paragraph 0013).

As per claim 15:

Recites the same limitation as in claim 6 and has been addressed in connection with the rejection set forth in claim 6.

10. Claims 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hellerstein et al. (United States Patent No.: US 7,113,461) in view of Johnston (United States Patent No.: US 6,189,142 B1).

As per claim 14:

Hellerstein discloses the computer network as in claim 9 above, but does not explicitly disclose the key performance indicator includes annual downtime, average response time, or operating cost rate.

However, Johnston discloses an analogous network includes responses time (**“response time”** Col 1, line 61).

Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to modify Hellerstein’s approach to

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include response time. One having an ordinary skill in the art would have been motivated to include comparing response time in Hellerstein's approach because **"where the time that elapses between a user's request and the program's response to the user is calculated for the purpose of comparing it to what a user may consider acceptable"** Col 1, line 61-65)

As per claim 16:

Hellerstein and Johnston disclose the computer network as in claim 9 above; and Hellersten further discloses:

- wherein the comparing of the at least one operating parameter with the key performance indicator comprises automatically reprovisioning the software when the key performance indicator falls below a minimum level for the key performance indicator that is set by the operating parameter (**"region server determines if each of the end point machines has an appropriate amount of resources (CPU, RAM, disk space, swap space, etc.)"** Col 8, line 32-35, **these elements are the normal key performance indicators that are used to track the performance by network administrator.**)

***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is



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filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip H. Nguyen whose telephone number is (571) 270-1070. The examiner can normally be reached on Monday - Thursday 10:00 AM - 3:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y. Zhen can be reached on (571) 272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PN  
12/27/06

  
WEI ZHEN  
SUPERVISORY PATENT EXAMINER